### Water Efficiency Standards

for State Buildings and Institutions of Higher Education Facilities-Update

Felix A. Lopez, P.E.
State Energy Conservation Office
SAEAG Meeting @ SECO
April 15, 2010

State Energy Conservation Office

#### Overview

- Background
  - Chapter 447-Texas Government Code
  - 77th Texas Legislature-2001 (HB 3286)
  - Texas Administrative Code (TAC)
  - SECO Water Conservation Guidelines-2002
- 80<sup>th</sup> Texas Legislature-2007 (HB 4)
- SECO Water Standards Committee
- Draft SECO Water Standards
  - Contents
  - Review
  - Adoption



# Background Chapter 447.004

- Applies for State-Funded buildings only:
  - State Agencies and Institutions of Higher Education
- New Construction, Retrofit, and Addition to Existing
- SECO shall review and update the standards biennially



# Background Chapter 447.004

- A state agency or an institution of higher education may not begin construction of a new building or a major renovation project, before the design architect or engineer has:
  - certified that the design complies with the standards established under this chapter, including engineering documentation
  - provided SECO a copy of that certification



# Background 77<sup>th</sup> Texas Legislature-2001

- HB 3286 amends Ch 447.004 to include water conservation along with energy conservation
- Directed SECO to establish and publish mandatory energy and water conservation design standards for each new state building or major renovation project



### Background (TAC) Rules §19.31 to Rule §19.34

- Rule §19.31-Requirement to Use Design Standards adopted by SECO
- Rule §19.32-Energy and Water Conservation Design Standards Adoption by SECO
- Rule §19.33-Major Renovation Projects Definition
- Rule §19.34-Submission of Certification and Compliance Documentation Requirement



#### Texas Administrative Code Rules §19.33

A major renovation project is a building renovation or improvement that affects the energy or water use of the facility



### SECO Water Conservation Guidelines-2002

- Developed by a committee with members from SECO, TWDB, and City of Austin
- Guidelines-Recommendations
- Not a mandate (Suggested)
- Not included in the SECO Compliance Certification



### 80th Texas Legislature-2007

- HB 4 amends Ch 447.004 to include on-site reclaimed system technologies
- New state buildings at least 10,000 sf. ft.
- Any other new state building for which the incorporation of such systems is feasible.
- The effective date was September 1, 2009
- SECO added a compliance checkbox to the Compliance Certification

State Energy Conservation Office

### 80th Texas Legislature-2007

- Do not apply to a new building if:
  - A state agency or higher education institution determines it is impractical
  - Notifies SECO and provides supporting documentation



#### 80th Texas Legislature-2007

- On-site reclaimed water system technologies for non-potable indoor use and landscaping be incorporated into the design thru
  - Rainwater harvesting
  - Condensate collection
  - Cooling tower blow-down



### SECO Water Standards Committee

- Created by SECO in January 2009
- SAEAG members invited
- Final members from SECO, TWDB, TFC, UT-Austin, UT Systems, TWC, and City of Austin
- Monthly meetings
- Develop the Draft SECO Water Standards



- Review of the SECO Water Guidelines-2002 and used as the baseline
- Other States Water Standards like New York, California, and Minnesota
- Water information from: TCEQ, TFC, SAWS, City of Austin, City of Dallas, TWDB, DOE, EPA-Energy Sense
- ASHRAE Std. 189.1





- Acknowledgements
- Background
- Purpose of Water Conservation Standards
- Introduction
- Overview
- Definitions
- Abbreviations



- Cont. Table of Contents:
- 1.0-Irrigation and Landscape Design
- 2.0-HVAC
- 3.0-Refrigeration and Water Treatment
- 4.0-Rainwater Harvesting, Reclaimed Water, Recycled Water, and Reuse
- 5.0-Plumbing Fixtures



- Cont. Table of Contents:
- 6.0-Laundry
- 7.0-Food Service
- 8.0-Metering and Pumps
- 9.0-Auto Services and Vehicle Washing
- 10.0-Lab Facilities:Photography/Medical
- 11.0-Pools, Spas, and Special Features
- References



- Final draft finished on June 2010
- The file needs formatting
- SECO is in the process of consulting with CPA-General Counsel for final review and adoption
- The plan is to adopt the SECO Water Standards effective on January 1, 2011



#### SECO Water Standards Update





#### SECO Water Standards Update

Thank you!

- Felix A. Lopez, P.E.
  - State Energy Conservation Office
  - 512-463-1080
  - felix.lopez@cpa.state.tx.us
  - www.seco.cpa.state.tx.us

